

WE CLAIM:

1. A heating system, comprising:
a shroud defining an inner volume; and
a plurality of electrical infrared heating elements oriented generally downward or lateral facing in the inner volume of the shroud.
2. The system of claim 1, wherein the shroud includes a plurality of radially extending supports and the heating elements are mounted on exterior surfaces of the radially extending supports.
3. The system of claim 1, wherein the infrared heating elements provide substantially solely infrared heat.
4. The system of claim 1, wherein the infrared heating elements each include an electric filament enclosed in a quartz glass housing.
5. The system of claim 1, wherein the infrared heating elements each include a reflector positioned adjacent to an upward facing surface of the infrared heating elements.
6. The system of claim 1, wherein the shroud includes refractive material.
7. The system of claim 1, further comprising at least one heat sensor configured to monitor temperatures of objects heated by the heating elements.
8. The system of claim 1, wherein the heating elements provide infrared waves having a wavelength between about 1 μm to about 20 μm .
9. A patio umbrella heating system, comprising:

a patio umbrella including radially extending supports and webbing extending between the supports; and

a heating element providing substantially solely infrared heat and being mounted to at least one of the supports.

10. The system of claim 9, further comprising two or more heating elements, each heating element being mounted to a separate support.

11. The system of claim 9, further comprising at least two heating elements, and each heating element is supported by two or more supports.

12. The system of claim 9, further comprises a center support secured to the umbrella at a central portion of the umbrella and extending downward from the umbrella.

13. The system of claim 9, further comprising an umbrella support secured to the umbrella at a central portion of the umbrella and extending upward from the umbrella.

14. The system of claim 9, wherein the radially extending supports are curved so as to form a downward facing concave shape

15. The system of claim 9, wherein the radially extending supports are straight and are sloped from a central point downward relative to a horizontal plan so as to form a conical shape ("the umbrella is conical shaped and faces downward").

16. The system of claim 11, further comprising controls for controlling functions of the heating element.

17. The system of claim 16, wherein the controls are mounted to the support pole.

18. The system of claim 9, wherein the umbrella is adjustable between an open position and a closed position.

19. The system of claim 9, wherein the heating element is substantially downward facing.

20. The system of claim 9, wherein the heating element is radially inward facing.

21. The system of claim 9, wherein the heating elements are electronic.

22. The system of claim 9, wherein the heating elements generate heat using combustion.

23. The system of claim 9, further comprising a proximity sensor that generates an on/off signal for the heating elements in response to an object being positioned near the patio umbrella.

24. The system of claim 9, further comprising an heating element switch that is operable to automatically turn the heating element off when the umbrella is adjusted from an open position to a closed position.

25. A heating system, comprising:
a plurality of radially extending support members;
webbing extending between the radially extending support members; and
an infrared heating element secured to an outer surface of at least one of the radially extending supports.

26. The system of claim 25, wherein infrared heating element solely provides infrared heat.

27. The system of claim 25, wherein the infrared heating element is oriented in a generally downward facing direction.

28. The system of claim 25, wherein the infrared heating element is powered by electricity.

29. The system of claim 25, further comprising a reflector positioned adjacent to an upward facing side of the infrared heating element to reflect downward the infrared waves produced by the infrared heating element.

30. The system of claim 29, wherein the reflector comprises sheet metal.

31. The system of claim 29, wherein the reflector comprises a ceramic fiber and a binder.

32. The system of claim 29, wherein the infrared heating element is a ceramic infrared emitter.

33. The system of claim 29, wherein the infrared heating element is a metal infrared emitter.

34. The system of claim 29, wherein the infrared heating element is a quartz glass infrared emitter.

35. The system of claim 29, wherein the infrared heating element is selected from a group consisting of a tube, a panel and an Edison bulb type infrared emitter.

36. A method of heating objects in proximity to a patio umbrella using an infrared heating element, the method comprising the steps of:

opening the umbrella;

supporting the infrared heating element with the umbrella;

orienting the infrared heating elements in a generally downward direction; and
directing infrared waves from the infrared heating element to the objects.

37. A heated patio furniture set, comprising:
a table;
at least one chair; and
an umbrella comprising:
a plurality of radially extending support members;
webbing extending between the radially extending support members; and
an infrared heating element secured to at least one of the radially extending supports in a generally downward facing direction to direct infrared waves toward the table and chairs.

38. The furniture set of claim 37, further comprising a heat sensor mounted to the table and chair to determine an amount of heat generated in the table and chair from the directed infrared waves.

39. The furniture set of claim 37, wherein the umbrella is supported in an upright position with the table.

40. The furniture set of claim 38, wherein the furniture comprises a material that absorbs at least some of the infrared waves and is heated.